

TR0329M-EVB-B

Application Note

2300MHz~2700MHz

5.0V 90mA-HG mode

5.0V 45mA-LG mode

Rev-1.0

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3. TR0329M-EVB-B LAYOUT

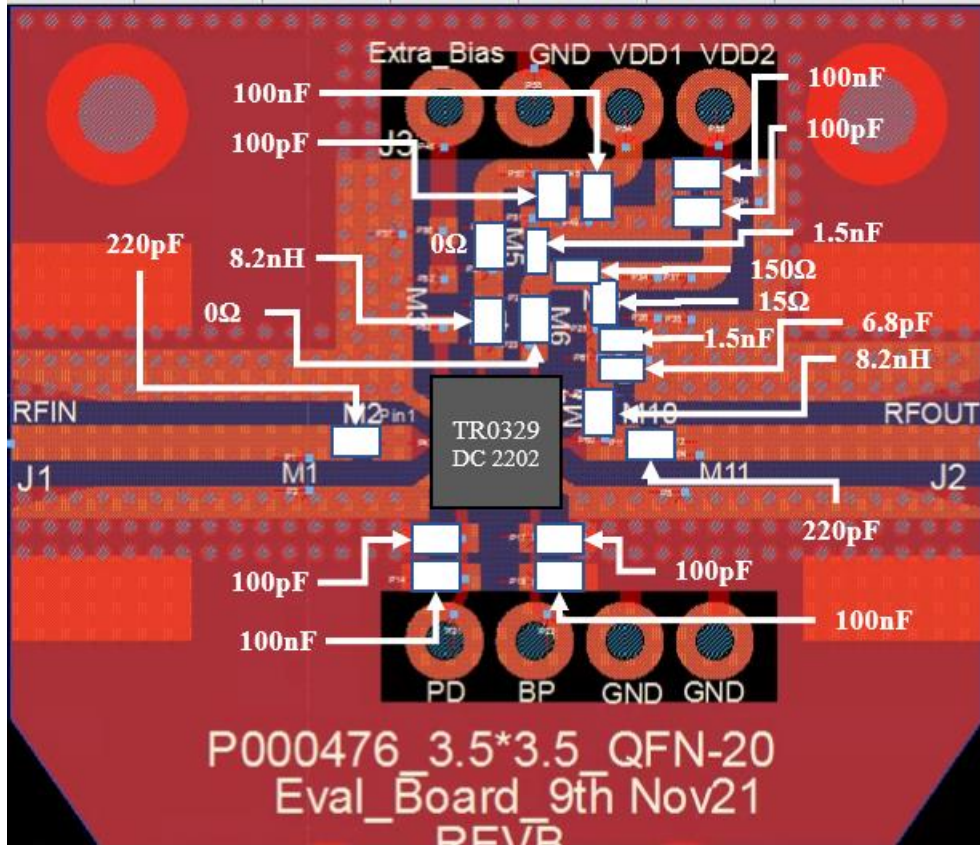


Figure 2 TR0329M-EVB-B 2300MHz ~ 2700MHz layout

4. TR0329M-EVB-B BILL OF MATERIAL

Component ID	Value	Manufacturer	Recommended Part Number	Qty
R1, R2	0Ω	Panasonic	ERJ-2GE0R00X	2
C7	6.8pF	Murata	GJM1555C1H6R8BB01D	1
M2	220pF	Kemet	C0402C221K5GACAUTO	2
C2, C5, C9, C10	100pF	AVX	04025A101JAT4A	4
C1, C4, C8, C11	100nF	TDK	C1005X7R1H104K050BE	4
L1, L2	1.5nF	Murata	04025C152JAT2A	2
R4	15 Ω	Panasonic	ERJ-H2RD15R0X	1
R3	150Ω	Panasonic	ERJ-2RHD1500X	1
C3, C6	8.2nH	Coil craft / Würth Electronics	0402HP-8N2XGE / 744916082	2
PCB	Rogers RO4350B, 20 mils, 1 oz copper			1

5. TR0329M-EVB-B BOARD MEASUREMENT RESULTS

5.1. TR0329M-EVB-B TEST RESULTS

All the tests are carried out at room temperature.

5.2. Summary

Parameter	Test Condition	Typical Values	Unit
Operational frequency Range		2.3-2.7	GHz
Gain	HG	37-36.8	dB
	LG	18-16.7	dB
Noise Figure (De-embedded)	HG	0.5-0.6	dB
	LG	0.5-0.6	dB
EVB Noise Figure	HG	0.6-0.7	dB
	LG	0.6-0.7	dB
Input Return Loss	HG	Less than -11	dB
	LG	Less than -11	dB
Output Return Loss	HG	Less than -11	dB
	LG	Less than -5.5	dB
OP1dB	HG	17-18.5	dBm
	LG	10-12	dBm
OIP3 (With 1MHz tone spacing)	0dBm per tone,	30-31	dBm
	-2dBm per tone,	21-23	dBm
Current, Id	HG	90	mA
	LG	45	
	PD	5	
Isolation between RFIN and RF-out PD mode ON and Bypass ON	At 2.5GHz Receive operation	55	dB
Isolation between RFIN and RF-out PD mode ON and High Gain ON			dB

Figure 3 TR0329M-EVB-B Electrical Characteristics Summary

5.3. S parameters.



Figure 4.a. S parameters of HG mode of TR0329M-EVB-B

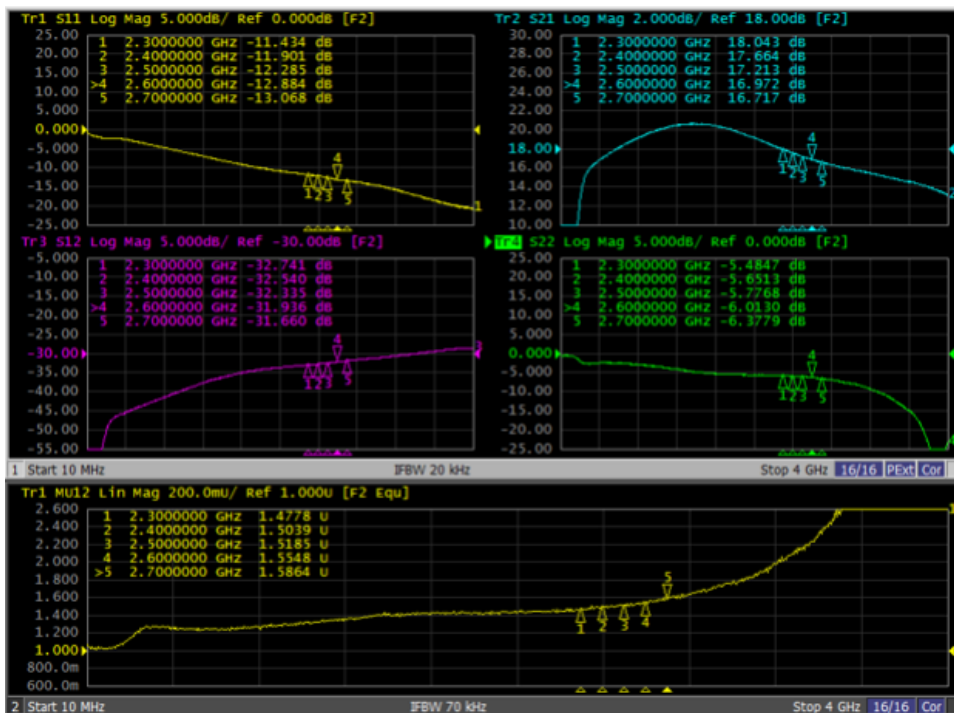


Figure 4.b. S parameters of LG mode of TR0329M-EVB-B

5.4. De-embedded Noise Figure.

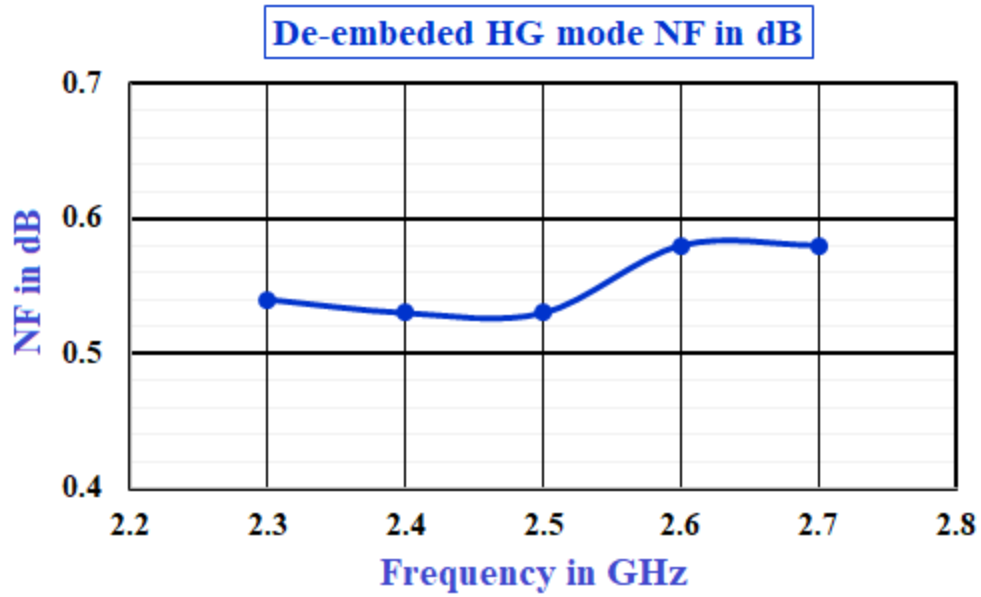


Figure 5.a. De-embedded NF of HG mode of TR0329M-EVB-B

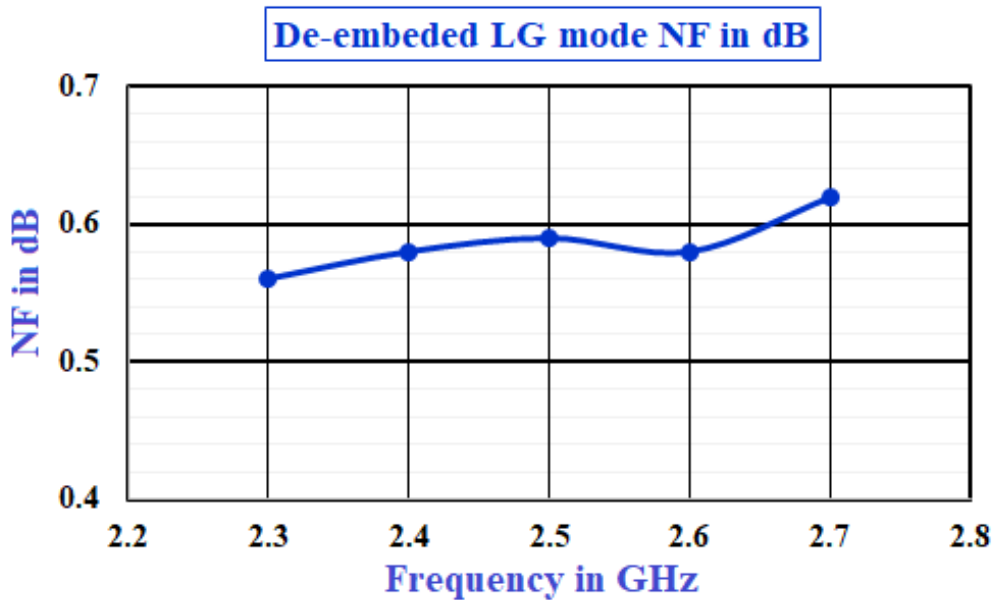


Figure 5.b. De-embedded NF of LG mode of TR0329M-EVB-B

5.5. Large Signal Test Results.

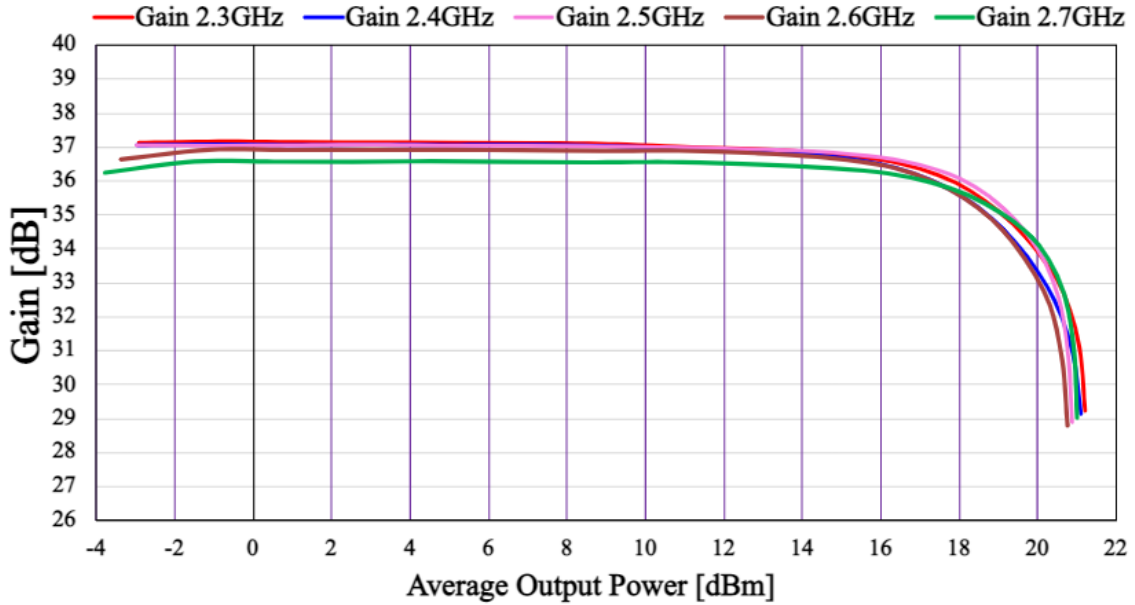


Figure 6.a. Gain Vs Pout of HG mode of TR0329M-EVB-B

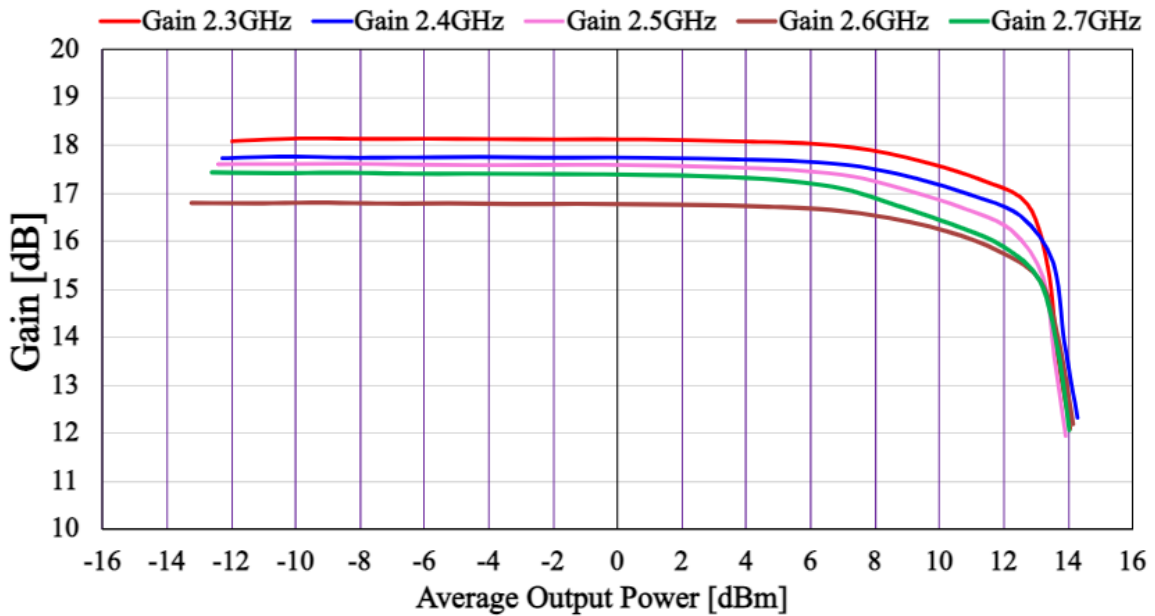


Figure 6.b. Gain Vs Pout of LG mode of TR0329M-EVB-B

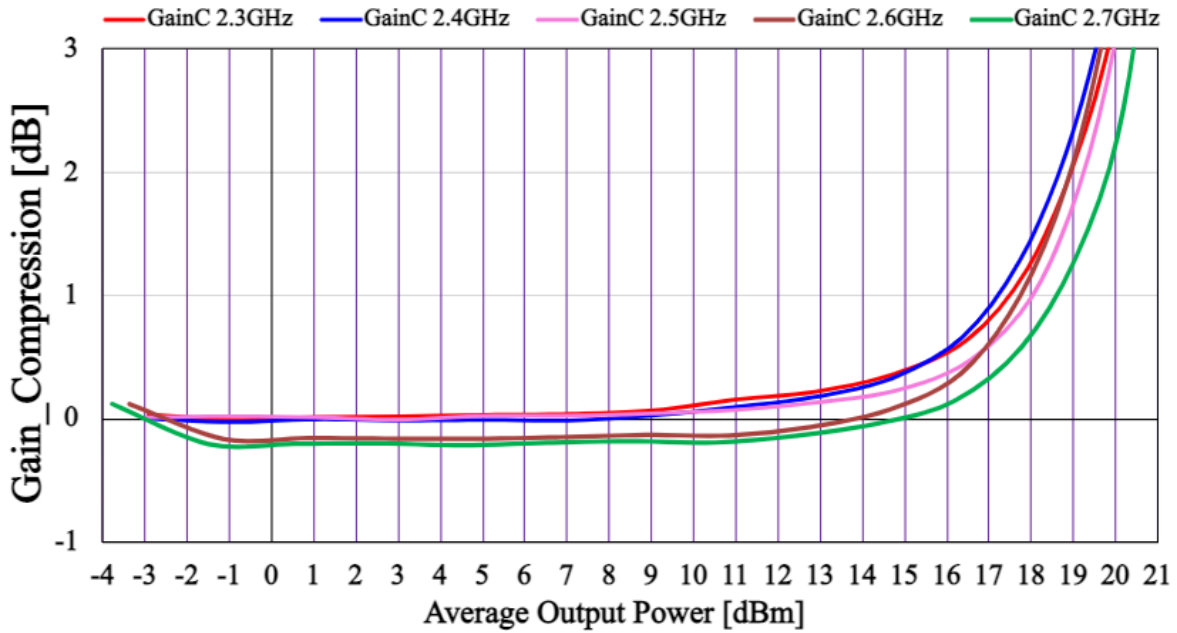


Figure 7.a. Gain compression Pout of HG mode of TR0329M-EVB-B

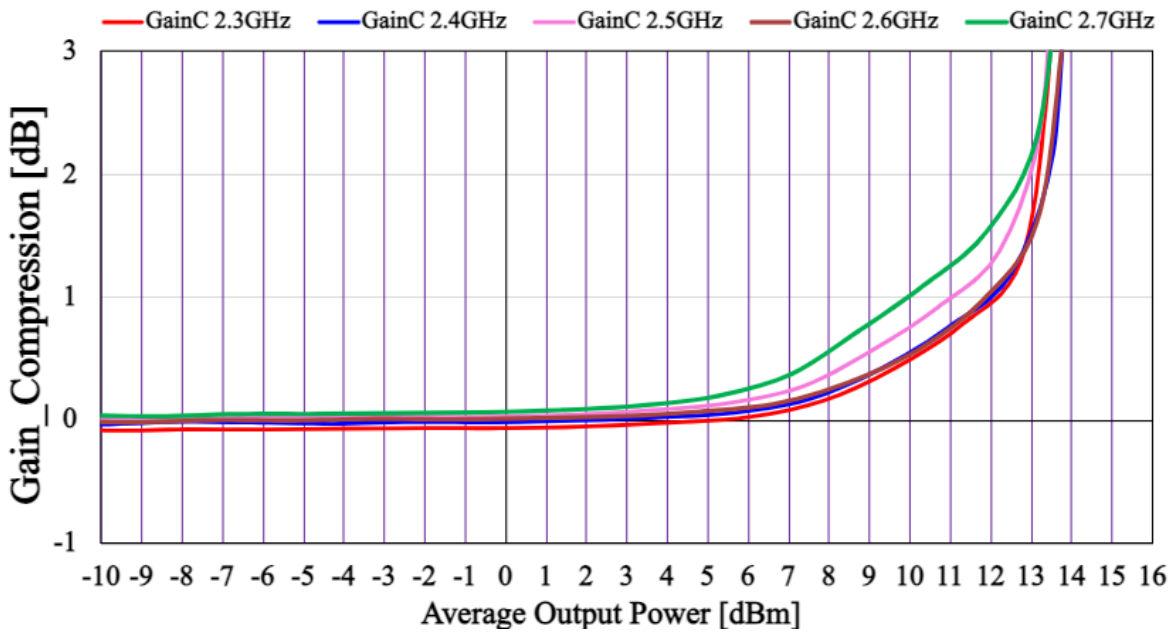


Figure 7.b. Gain compression Pout of LG mode of TR0329M-EVB-B

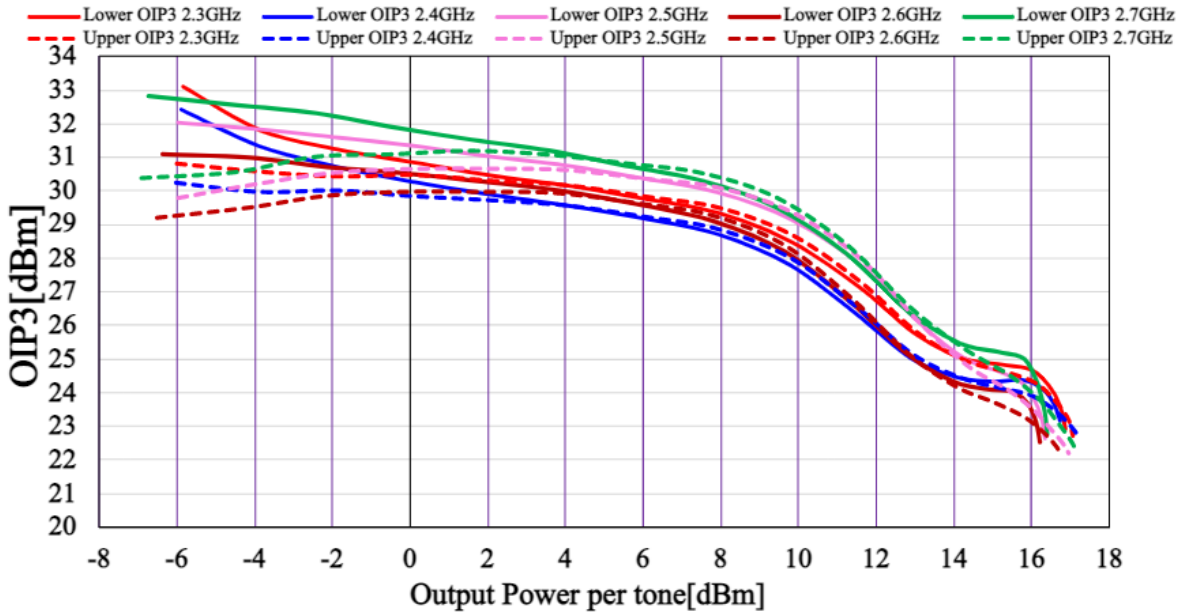


Figure 8.a. OIP3 Vs Pout per tone of HG mode of TR0329M-EVB-B

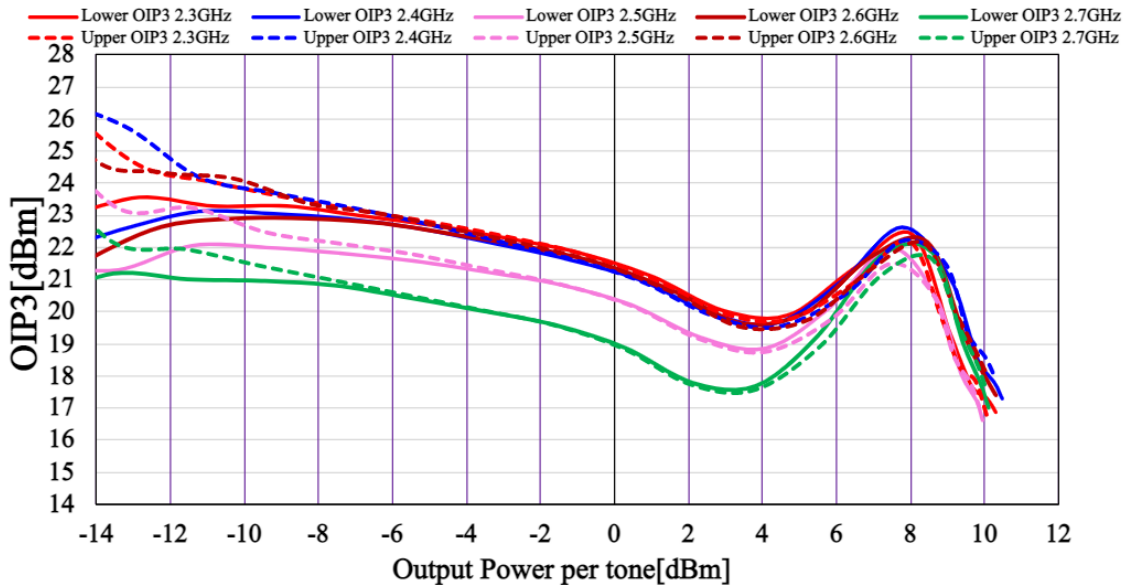


Figure 8.b. OIP3 Vs Pout per tone of LG mode of TR0329M-EVB-B

